

Remarks

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

Initially, it is noted that a Petition to Make Special, an Information Disclosure Statement (IDS), and a Preliminary Amendment were filed on January 24, 2003. However, based on the contents of the Office Action, it is apparent that these papers have not been considered because claims 1, 8 and 11 were cancelled and claims 2-6, 9, 10 and 12-24 were amended in the Preliminary Amendment. Enclosed herewith are complete copies of the Petition to Make Special, IDS, and Preliminary Amendment along with a date-stamped postcard receipt as evidence that these papers were, in fact, filed on January 24, 2003. Since the application has now been acted upon, the Petition to Make Special no longer needs to be considered. However, entry of the Preliminary Amendment is requested so as to incorporate the changes to the specification, abstract and claims made therein. The remainder of this response will, to the extent possible, address the Office Action as if the Preliminary Amendment had been timely entered.

Further, consideration of the IDS originally filed on January 24, 2003 is also requested.

The drawings have been objected to as not illustrating the "short circuiting connection members" recited in claims 21 and 22 and the "slot" recited in claims 23 and 24. In response to this objection, replacement Figures 6A-6C are included herewith. Replacement Figure 6A is identical to original Figure 6. Replacement Figures 6B and 6C are provided so as to illustrate the short circuiting members and the slot, respectively. It is noted that replacement Figures 6B and 6C do not constitute new matter since they schematically illustrate what is clearly described in the specification at paragraphs [0017], [0018] and [0038]. As a result of the addition of replacement Figures 6B and 6C, withdrawal of this objection to the drawings is respectfully requested.

Due to the inclusion of replacement Figures 6A-6C, the specification has been amended so as to include references to these figures where applicable. No new matter has been added by these amendments.

Regarding the objection to the abstract for containing reference characters that are not enclosed within parentheses, it is noted that the amendments to the abstract included with the above-

discussed Preliminary Amendment included the removal of all of the reference characters. As a result, this objection will be moot once the Preliminary Amendment is entered.

Claims 19-24 have been rejected under 35 U.S.C. §112, second paragraph, as failing to set forth subject matter that the Applicants regard as their invention. It is noted that the limitation of claims 19 and 20 has been incorporated into claims 21-24, claims 21-24 have been amended so as to be dependent from either claim 2 or claim 3, and claims 19 and 20 have been cancelled without prejudice or disclaimer to the subject matter contained therein. It is also noted that claims 21 and 22 both recite that the built-in antenna includes short-circuiting connection members and claims 23 and 24 both recite a slot. Therefore, claims 21-24 correspond with the scope of the invention as discussed in the specification. As a result, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claims 1-5, 10-13, 17 and 18 have been rejected under 35 U.S.C. §102(b) as being anticipated by Curtis (US 6,130,650). Claims 1, 8 and 9 have been rejected under 35 U.S.C. §102(e) as being anticipated by Egorov (US 6,614,400). Claims 6 and 7 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Curtis in view of Sato (US 4,827,266).

Claims 14-16 have been indicated as containing allowable subject matter. The Applicants would like to thank the Examiner for this indication of allowable subject matter.

In addition to the amendments discussed above, this Amendment: (1) adds the limitations of claims 12 and 13 to claims 2 and 3, respectively; (2) changes the dependency of claims 14, 15 and 18 from claim 12 to claim 2; (3) adds new claims 25-30, which are similar to claims 6, 7, 9 and 14-16, respectively, but depend from claim 3; and (4) cancels claims 10, 12 and 13 without prejudice or disclaimer to the subject matter contained therein.

The above-mentioned rejections are respectfully traversed and submitted to be inapplicable to the claims for the following reasons.

Claim 2 is patentable over Curtis and Egorov, since claim 2 recites a mobile radio having, in part, a built-in antenna and a base plate, wherein the built-in antenna is of a planar configuration, the built-in antenna is slanted so that a space between the built-in antenna and the base plate is larger at an upper end than at a lower end, and the base plate comprises an antenna-housing base plate on which the built-in antenna is disposed, and a circuit base plate which is a remainder of the base plate,

the antenna-housing base plate and the circuit base plate not being aligned on a same plane. Curtis and Egorov fail to disclose or suggest a built-in antenna and a base plate as recited in claim 2.

Curtis discloses a curved inverted antenna 416 having a curved inductive stub 204 located on one side of a feed track 402, which supplies the curved inverted antenna 416 with a signal, and a capacitive line 206 on the other side of the feed track 402. A short circuit 420 connects the curved inductive stub 204 to a ground conductor 424. Further, the curved inverted antenna 416 is disclosed as being built on a printed circuit board 418. (See column 3, line 59 - column 4, line 58, especially column 3, lines 59-61, and Figure 4).

Based on this discussion of Curtis, it is apparent that the curved inverted antenna 416 is located on the printed circuit board 418 along with the feed track 402. Therefore, since the curved circuit antenna 416 is built directly on the printed circuit board 418, Curtis necessarily fails to disclose or suggest (1) a base plate having an antenna-housing base plate and a circuit base plate not being aligned on a same plane; and (2) a space between a built-in antenna and the base plate that is larger at an upper end than at a lower end.

Egorov discloses an antenna 500 having a parasitic element 600. The antenna 500 is mounted on a substrate 900 which is located on a printed circuit board 560, the substrate 900 and the printed circuit board 560 being parallel to each other. The antenna 500 is connected to the printed circuit board 560 by a feeding pin 530 and a pair of grounding pins 540 and 610. (See column 8, line 39-63 and Figure 9).

Based on this discussion of Egorov, it is apparent that the space between the antenna 500 and the printed circuit board 560 occupied by the substrate 900 is of constant height. Therefore, Egorov fails to disclose or suggest a space between a built-in antenna and a base plate that is larger at an upper end than at a lower end.

As a result, it is apparent that neither Curtis, nor Egorov, discloses or suggests the present invention as recited in claim 2.

Claim 3 is also patentable over Curtis and Egorov, since claim 3 recites a mobile radio having, in part, a built-in antenna and a base plate, wherein the built-in antenna comprises a plurality of planes, the plurality of planes being structured as steps so that a space between the built-in antenna and the base plate is larger at an upper end than at a lower end, and the base plate comprises an

antenna-housing base plate on which the built-in antenna is disposed, and a circuit base plate which is a remainder of the base plate, the antenna-housing base plate and the circuit base plate not being aligned on a same plane. Curtis and Egorov fail to disclose or suggest a built-in antenna and a base plate as recited in claim 3.

As disclosed above, Curtis discloses the curved inverted antenna 416 having the curved inductive stub 204 located on one side of the feed track 402, which supplies the curved inverted antenna 416 with a signal, and the capacitive line 206 on the other side of the feed track 402. The short circuit 420 connects the curved inductive stub 204 to the ground conductor 424. Further, the curved inverted antenna 416 is disclosed as being built on the printed circuit board 418. (See column 3, line 59 - column 4, line 58, especially column 3, lines 59-61, and Figure 4).

Based on this discussion of Curtis, it is apparent that the curved inverted antenna 416 is on a single plane and is located on the printed circuit board 418 along with the feed track 402. Therefore, since the curved circuit antenna 416 is built directly on the printed circuit board 418, Curtis necessarily fails to disclose or suggest (1) a built-in antenna comprising a plurality of planes, the plurality of planes being structured as steps; (2) a base plate having an antenna-housing base plate and a circuit base plate not being aligned on a same plane; and (3) a space between the built-in antenna and the base plate that is larger at an upper end than at a lower end.

Also as discussed above, Egorov discloses the antenna 500 having the parasitic element 600. The antenna 500 is mounted on the substrate 900 which is located on the printed circuit board 560, the substrate 900 and the printed circuit board 560 being parallel to each other. The antenna 500 is connected to the printed circuit board 560 by the feeding pin 530 and the pair of grounding pins 540 and 610. (See column 8, line 39-63 and Figure 9).

Based on this discussion of Egorov, it is apparent that the antenna 500 is on a single plane and the space between the antenna 500 and the printed circuit board 560 occupied by the substrate 900 is of constant height. Therefore, Egorov fails to disclose or suggest (1) a built-in antenna comprising a plurality of planes, the plurality of planes being structured as steps; and (2) a space between the built-in antenna and a base plate that is larger at an upper end than at a lower end.

As a result, it is apparent that neither Curtis, nor Egorov, discloses or suggests the present invention as recited in claim 3.


As for Sato, it is relied upon as disclosing a shield that is located between a built-in antenna and a base plate. However, Sato fails to disclose or suggest the features of claims 2 and 3 discussed above.

Because of the above-mentioned distinctions, it is believed clear that claims 2-7, 9, 14-18 and 21-30 are allowable over the references relied upon on the above-identified rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 2-7, 9, 14-18 and 21-30. Therefore, it is submitted that claims 2-7, 9, 14-18 and 21-30 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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